

35 MHz - Order No. 20256/35
40 and 41 MHz - Order No. 20256/40

The Webra **SCAN DS8** receiver is a precision 8-channel dual-conversion receiver exploiting PPL synthesizer technology for PPM (FM) receiver signals. The PLL synthesizer provides 10 kHz channel spacing in the 35 MHz A and B bands, and also in the 40 MHz and 41 MHz band. The receiver's micro-processor digitally analyses the transmitter signals before passing them on to the servos. A squelch circuit eliminates servo jitter. The receiver constantly monitors the received signal and the operating voltage, and generates a visual warning if interference occurs.

The receiver sockets are polarised gold-contact types for the JR/Futaba connector system, ensuring secure, reliable servo connections. A separate battery socket is provided.

Once the transmitter's spot frequency has been established, the receiver is "taught" the frequency using the easily accessible programming button. Either normal or fail-safe operation can be selected. The receiver features an LED programming indicator.

Webra scan technology means that plug-in crystals are a thing of the past. You can forget about all the problems caused by low-quality or age-affected crystals, as the **SCAN DS8** receiver is always a perfect match to your transmitter.

The high-quality electronic components are mounted on GRP printed circuit boards using surface mount technology (SMT). The usual quality assurance systems are maintained to ensure that your receiver is **highly reliable**.

The essential characteristics of the **SCAN DS8** receiver are as follows:

- ?? 8 servo outputs
- ?? PPM dual-conversion
- ?? Push-button frequency channel scan
- ?? Squelch circuit
- ?? Programmable fail-safe
- ?? Receiver monitor
- ?? Digital servo analysis
- ?? LED voltage display and error indicator
- ?? Automatic A-band and B-band detection
- ?? Separate battery socket
- ?? No plug-in crystals required

SCAN / PROGRAMMING procedure:

The receiver's scanning process can only be carried out when the receiving system is switched on. This is the procedure: **switch on the transmitter first**, then **press and hold the programming button "PROG"** on the receiver, and **only then switch on the receiving system**.

During the scan process the LED flashes at half-second intervals. If no transmitter signal is located, the LED flashes at a very high rate; this means that the procedure has failed, and must be repeated. Switch off the receiving system and re-start the entire programming procedure.

If the receiver locates a transmitter signal, the LED starts to flash at one-second intervals for a period of 10 seconds. If you press the programming button again during this period, the receiver stores the current stick positions for FAIL-SAFE mode. If the programming button is not pressed during this period, the receiver maintains the servos in the last valid position until the receiver picks up the transmitter signal again.

Receiver diagnosis /analysis:

The receiver automatically detects whether a 4-cell or 5-cell battery is in use.

While the receiver is operating the circuit is capable of diagnosing the following situations:

- a) radio interference = **LED flashes**
- b) low battery voltage = **LED glows** i.e. the voltage of a 4-cell battery has fallen below 4.4 V, or below 5.5 V for a 5-cell pack.

If both situations * (a + b) occur simultaneously, only the interference warning is displayed.

PPM (FM) transmission system

For this Frequency Modulation (PPM) receiver we have adopted the signal format used by the most popular radio control systems currently on the market.

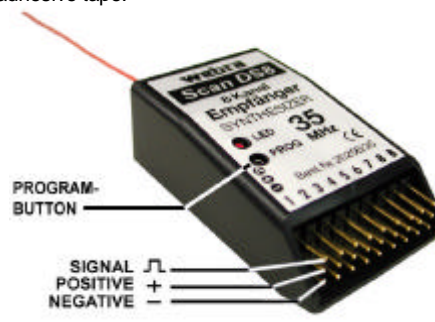
Certain manufacturers employ different R.F. techniques and layouts, making them completely or partly incompatible with this receiver.

IMPORTANT: please check carefully to ensure that your system works perfectly with this receiver, without "glitches" or interference.

Servo and battery connections:

The receiver output sockets are designed to accept servos with matching connectors (compatible with ROBBE and GRAUPNER). Connect the servos to the appropriate sockets numbered 1 - 8. Connect the receiver battery to the row of pins marked "B" via a switch harness.

Ensure that no cables are under linear strain; if you are not sure, secure them with adhesive tape.



Technical data:

Radio frequency	35 MHz, 40 and 41 MHz
Transmission system	PPM (FM)
Channel spacing	10 kHz
Operating voltage	3.5 - 8 V (4 - 5 cells)
Current drain	15 mA
Intermediate frequency	10.7 MHz, 455 kHz (dual conversion)
Temperature range	-10° to +55°C
Input sensitivity	0.7 µV
Aerial length	100 cm
Channel count	8
Dimensions	57x 31 x18 mm
Weight	25 g

Safety notes:

- ?? This receiver is approved exclusively for use in radio-controlled models.
- ?? Always switch on the **transmitter first**, then the receiver.
- ?? If the receiver is installed in a large model, the extended cables modify the RF environment. In such models we recommend the use of separation filters at the cable connections.
- ?? The full length of the receiver aerial should be routed out of the model in a straight line - don't roll or coil it up! **Never** shield the aerial with metal parts, metal foil or similar. In difficult circumstances we recommend a whip aerial.
- ?? Always deploy the receiver aerial well away from **electric motors, electronic speed controllers** and **flight batteries**.
- ?? All electric motors must be **suppressed**.
- ?? **Electrical noise** is caused by metallic parts (e.g. metal pushrods) rubbing together. This causes interference, and must be avoided at all costs.
- ?? Protect the receiver carefully from vibration. We recommend the use of soft anti-static foam rubber for this.
- ?? Check that the receiving system is operating correctly before every flight. With the transmitter aerial collapsed the system should work perfectly at a ground range of at least 50 m.
- ?? Ensure that the cables to the receiver battery are of adequate cross-section. Keep battery leads as short as possible.
- ?? Do not use **dry cells**. Use only rechargeable battery packs.
- ?? If your transmitter can be switched between PCM and PPM, always use it in PPM mode.